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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/805,791	03/22/2004	Alireza Shekariz	MET 008	9941
23408	7590	03/29/2006	EXAMINER	
GARY C. COHN, PLLC 1147 NORTH FOURTH STREET UNIT 6E PHILADELPHIA, PA 19123			PHAM, MINH CHAU THI	
			ART UNIT	PAPER NUMBER
			1724	

DATE MAILED: 03/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/805,791

Applicant(s)

SHEKARRIZ ET AL.

Examiner

Minh-Chau T. Pham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Call et al (6,120,573).

Call et al disclose a microimpactor system comprising a fluid conduit having a plurality of rows of microimpactors (12) arranged in the fluid conduit substantially transverse to a main direction of flow of fluid (16) through the fluid conduit, wherein the microimpactors (12) in at least two successive row are offset from each other (13a, 13b, 13c, col. 5, lines 4-10). Call et al further disclose the fluid conduit including a fluid inlet (42) and a fluid outlet (46 in Fig. 3B), means for moving fluid (58) through the system (col. 9, lines 25-34), and means for applying an electrical charge to the at least one microimpactor (col. 13, line 47 through col. 14, line 10). Claims 1-10 differ from the disclosure of Call et al in that the claims call for specific spacing between adjacent microimpactors. As to the numerical requirements, i.e. "spacing between adjacent microimpactors within a row from about 3 to about 20 times the microimpactor width, and the spacing between adjacent rows of microimpactors from about 3 to about 20 times the microimpactor width" of claim 1, "the microimpactor width is from about 10 to about 100 microns" of claim 6, "spacing between adjacent microimpactors within a row from 3 to about 10 times the microimpactor width" of claim 7, "spacing between adjacent rows of microimpactors within a row from 3 to about 10 times the microimpactor width" of claim 8, "spacing between adjacent microimpactors within a row from 5 to about 8

times the microimpactor width" of claim 9, "spacing between adjacent microimpactors within a row from 3 to about 10 times the microimpactor width" of claim 10, the specification contains no disclosure of either the critical nature of these requirements or any unexpected results arising therefrom, and as such these requirements would be arbitrary and therefore obvious. Applicants must show that these requirements are critical. In re Woodruff, 16 USPQ 2d 1934.

### ***Response to Arguments***

Applicant's arguments filed on January 23, 2006 have been fully considered but they are not persuasive.

APPLICANT ARGUES THAT THE SECONDARY REFERENCE WURZ DOES NOT DISCLOSE THE SPECIFIC MICROIMPACTOR SPACING AS STATED IN THE CLAIMS. THE EXAMINER NOW DROPS WURZ AND STILL MAINTAIN THE PRIMARY REFERENCE CALL ET AL AS THE PRIMARY REFERENCE UNDER THE 103(A) REJECTION OF CLAIMS 1-10 TO SHOW: Call et al disclose a microimpactor system comprising a fluid conduit having a plurality of rows of microimpactors (12) arranged in the fluid conduit substantially transverse to a main direction of flow of fluid (16) through the fluid conduit, wherein the microimpactors (12) in at least two successive row are offset from each other (13a, 13b, 13c, col. 5, lines 4-10). Call et al further disclose the fluid conduit including a fluid inlet (42) and a fluid outlet (46 in Fig. 3B), means for moving fluid (58) through the system (col. 9, lines 25-34), and means for applying an electrical charge to the at least one microimpactor (col. 13, line 47 through col. 14, line 10), as claimed. Claims 1-10 differ from the disclosure of Call et al in that

the claims call for specific spacing between adjacent microimpactors. As to the numerical requirements, i.e. "spacing between adjacent microimpactors within a row from about 3 to about 20 times the microimpactor width, and the spacing between adjacent rows of microimpactors from about 3 to about 20 times the microimpactor width" of claim 1, "the microimpactor width is from about 10 to about 100 mcirons" of claim 6, "spacing between adjacent microimpactors within a row from 3 to about 10 times the microimpactor width" of claim 7, "spacing between adjacent rows of microimpactors within a row from 3 to about 10 times the microimpactor width" of claim 8, "spacing between adjacent microimpactors within a row from 5 to about 8 times the microimpactor width" of claim 9, "spacing between adjacent microimpactors within a row from 3 to about 10 times the microimpactor width" of claim 10, the specification contains no disclosure of either the critical nature of these requirements or any unexpected results arising therefrom, and as such these requirements would be arbitrary and therefore obvious. Applicants **MUST** show that these requirements are critical. *In re Woodruff*, 16 USPQ 2d 1934.

Applicant's arguments with respect to claims 1-10 have been thoroughly considered but are moot in view of the new ground(s) of rejection, as discussed above.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not


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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh-Chau T. Pham whose telephone number is (571) 272-1163. The examiner can normally be reached on Mon/Tues/Thur/Fri 7:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
**Minh-Chau Pham**  
**Patent Examiner**  
**Art Unit: 1724**

**DUANE SMITH**  
**PRIMARY EXAMINER**

  
3-29-06

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**March 23, 2006**